

CLAIMS

I claim:

1. A method for accessing hardware I/O control  
5 blocks, which are stored in an hardware I/O control  
block array, by a parallel SCSI host adapter, said  
method comprising:  
    addressing one page in a plurality of pages  
    of said hardware I/O control block array for said  
10 parallel SCSI host adapter using a first portion  
of a hardware I/O control block array pointer in  
said parallel SCSI host adapter wherein said one  
page includes a plurality of storage sites for  
hardware I/O control blocks; and  
15      addressing a hardware I/O control block  
stored in said one page using a second portion of  
said hardware I/O control block array pointer in  
said parallel SCSI host adapter.
- 20      2. The method of Claim 1 wherein said addressing  
a hardware I/O control block stored in said one page  
further comprises:  
    using a tag supplied by a reconnecting SCSI  
25 target as said second portion.
3. The method of Claim 1 further comprising:  
    storing a reconnecting target address by said  
parallel SCSI host adapter.
- 30      4. The method of Claim 3 further comprising:  
    comparing a target address stored in said  
hardware I/O control block with said reconnecting  
target address.
- 35      5. The method of Claim 4 further comprising:

using said hardware I/O control block upon said target address and said reconnecting target address being equal.

5           6. The method of Claim 4 further comprising:  
            changing said first portion of said hardware  
I/O control block array pointer upon said target  
address and said reconnecting target address being  
unequal.

10           7. The method of Claim 6 further comprising:  
            addressing another page in said plurality of  
pages of said hardware I/O control block array for  
said parallel SCSI host adapter using said first  
15           portion of said hardware I/O control block array  
pointer in said parallel SCSI host adapter wherein  
said another page includes a plurality of storage  
sites for hardware I/O control blocks.

20           8. The method of Claim 7 further comprising:  
            addressing a hardware I/O control block  
stored in said another page using said second  
portion of said hardware I/O control block array  
pointer in said parallel SCSI host adapter.

25           9. The method of Claim 8 further comprising:  
            comparing a target address stored in said  
hardware I/O control block stored in said another  
page with said reconnecting target address.

30           10. The method of Claim 9 further comprising:  
            using said hardware I/O control block stored  
in said another page upon said target address  
stored in said hardware I/O control block stored  
35           in said another page and said reconnecting target  
address being equal.

11. A method for accessing hardware I/O control blocks, which are stored in a hardware I/O control block array, by a parallel SCSI host adapter, said method comprising:

storing hardware I/O control blocks for targets on a SCSI bus in a paged hardware I/O control block array; and

accessing one hardware I/O control block in said paged hardware I/O control block array addressed by a hardware I/O control block array pointer, wherein said hardware I/O control block array pointer includes a page identifier and a storage site identifier.

12. The method of Claim 11 wherein a first portion of said paged hardware I/O control block array pointer includes a page identifier, and said method further comprises:

configuring said page identifier to identify a page in said paged hardware I/O control block array so that said paged hardware I/O control block array pointer addresses one hardware I/O control block page in said array.

13. The method of Claim 12 further comprising:

loading a tag from a reconnecting target into said storage site identifier of said paged hardware I/O control block array pointer.

14. The method of Claim 13 further comprising:

comparing a target address stored in said one hardware I/O control block with an address of said reconnecting target.

15. The method of Claim 14 further comprising:

using said hardware I/O control block upon  
said target address and said address of said  
reconnecting target being equal.

- 5        16. A system comprising:  
         a parallel SCSI host adapter comprising;  
             a sequencer; and  
             a paged hardware I/O control block array  
         pointer coupled to said sequencer; and  
10        a memory coupled to said paged hardware I/O  
control block array pointer, and including a paged  
hardware I/O control block array comprising:  
         a plurality of pages going from a lowest  
         page to a highest page, wherein each of said  
15        plurality of pages further comprises:  
             a plurality of hardware I/O control  
             block storage sites, wherein a number of  
             said hardware I/O control block storage  
             sites in said plurality of hardware I/O  
20        control block storage sites on at least  
         one of said plurality of pages is equal  
         to a number of unique tag values that  
         can be returned by a tagged queue SCSI  
         target reconnecting to said parallel  
25        SCSI host adapter.

17. The system of Claim 16 wherein said memory is  
external to said parallel SCSI host adapter.

- 30        18. The system of Claim 16 wherein said memory is  
internal to said parallel SCSI host adapter.

19. A memory comprising:  
         an expanded SCSI control block array for a  
35        parallel SCSI host adapter, said expanded SCSI  
control block array comprising:

a plurality of pages going from a lowest page to a highest page, wherein each page further comprises:

- 5           a plurality of SCSI control block storage sites,
- wherein a number of SCSI control block storage sites in said plurality of SCSI control block storage sites on at least one of said plurality of pages is equal to a
- 10          number of unique tag values that can be returned by a tagged queue SCSI target reconnecting to said parallel SCSI host adapter.

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